

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/13/08 has been entered.

Drawings

The replacement drawings were received on 11/26/07. These drawings are accepted.

Specification

The replacement specification was received on 11/26/07. This replacement is accepted.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Andrew Wilford on 9/16/08.

The application has been amended as follows:

IN THE CLAIMS: Amend claims **11, 13, 14, and 15** as follows.

Delete claim 11 and replace it with the following:

11. In combination:

a thermally stressed turbine component, and

a heat-insulating layer overlying a surface of the turbine component and having a perovskite structure of the general formula $A_{1+r} (B'_{1/3+x} B''_{2/3+y}) O_{3+z}$ in which:

A = at least one element of the group (Ba, Sr, Ca, Be),

B' = at least one element of the group (Mg, Ca, Sr, Ba),

B'' = at least one element of the group (Ta, Nb), and

$-0.1 < r, x, y, z < 0.1$.

In claim 13, at line 4 replace "a first" with "an".

Delete claim 14 and replace it with the following:

14. The combination defined in claim 13, wherein the intermediate layer comprises a MCrAlY alloy where M = Co or Ni.

Delete claim 15 and replace it with the following:

15. A method of protecting a thermally stressed turbine component, the method comprising:

applying to a surface of the turbine component a heat-insulating layer having a perovskite structure of the general formula $A_{1+r} (B'_{1/3+x} B''_{2/3+y}) O_{3+z}$ in which:

A = at least one element of the group (Ba, Sr, Ca, Be),

B' = at least one element of the group (Mg, Ca, Sr, Ba),

B'' = at least one element of the group (Ta, Nb), and

$-0.1 < r, x, y, z < 0.1$.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: the prior art of record does not teach or provide motivation to form a heat insulating layer overlying a turbine engine component comprising a composition of elements structurally related as set forth in claim(s) 11-15. Specifically, the prior art fails to teach use of such a perovskite as a thermal barrier layer for a turbine engine component. Further, there does not appear to be motivation to use such an oxide, normally found in forming dielectric layers and the like, in this fashion.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON S. AUSTIN whose telephone number is (571)272-8935. The examiner can normally be reached on Monday-Friday: 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 1794

/John J. Zimmerman/
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/Aaron Austin/